

HTML5

HTML5 PRESENTATION

by Gonghe Shi



WHAT IS HTML5?

HTML5 is the 5th revision of the HTML standard as proposed by Hypertext Application Technology Working group and adopted by W3C.



HTML STANDS FOR HYPERTEXT MARKUP LANGUAGE

- Hypertext:
 - Text that you click to jump from document to document. This is a reference to the ability of Web pages to link to one another.
- Markup:
 - Tags that apply layout and formatting conventions to plain text. Literally, the plain text is “marked up” with the tags
- Language:
 - A reference to the fact that HTML is considered a programming language.



HISTORY OF HTML

- Before HTML5
- History of HTML5



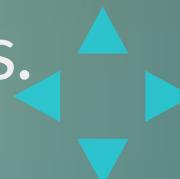
BEFORE HTML5

- 1991. HTML
- 1994. HTML2
- 1996. CSS1 + Javascript
- 1997. HTML4



HISTORY OF HTML5 - 1

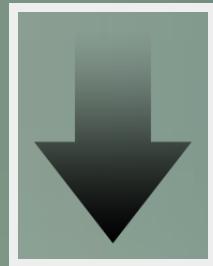
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HISTORY OF HTML5 - 2

- 2011 March. Disney buys HTML5 gaming start-up.
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NEW FEATURES IN HTML5



NEW DOCTYPE

Still using that pesky, impossible-to-memorize XHTML doctype?

```
1 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"  
2 "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd"
```

If so, why? Switch to the new HTML5 doctype

```
1 <!DOCTYPE html>
```

In fact, it isn't even really necessary for HTML5. It's used for current, and older browsers that require a specified doctype. Browsers that do not understand this doctype will simply render the contained markup in standards mode.



THE SEMANTIC HEADER AND FOOTER

Gone are the days of:

```
<div id="header">  
    ...  
</div>  
  
<div id=                      "footer">  
    ...  
</div>
```

Divs, by nature, have no semantic structure -- even after an `id` is applied. Now, with HTML5, we have access to the `<header>` and `<footer>` elements. The mark-up above can now be replaced with:

```
<header>  
    ...  
</header>  
  
<footer>  
    ...  
</footer>
```

It's fully appropriate to have multiple headers and footers in your projects.

Try not to confuse these elements with the "header" and "footer" of your website. They simply refer to their container. As such, it makes sense to place, for example, meta information at the bottom of a blog post within

TO QUOTE OR NOT TO QUOTE

- With Quotation:

```
<p style="font-size:70%; color:yellow;">Hello~<
```



- Result:

Hello~

- Without Quotation:

```
<p style=font-size:70%;color:yellow;>Hello~
```

- Result:

Hello~

They are the same! HTML5 is not XHTML. You don't have to wrap your attributes in quotation marks if you don't want to. You don't have to close your elements. There's nothing wrong with doing so, if it makes you feel more comfortable.

HTML 5 GEOLOCATION DEMO

Click the button to get your position:



LOCAL STORAGE AND SESSION STORAGE

Local Storage: Data Store Get Clear

Session Storage: Data Store Get Clear



MAKE YOUR CONTENT EDITABLE

TO-DO LIST

1. Buy a Lamborghini
2. Buy a beach mansion
3. Win the lottery

It is considered a new attribute because it wasn't added to the HTML specification until HTML5. But if you put it in an HTML 4 document it will work.



MAKE YOUR CONTENT EDITABLE - TAKE ADVANTAGE OF LOCAL STORAGE

TO-DO LIST

1. Buy a Lamborghini
2. Buy a beach mansion
3. Win the lottery



NEW FORM ELEMENT

```
<input type="text" required =""/> 
```

```
<input type="email" value="some@email.com" /> 
```

```
<input type="date" min="2014-08-11" max="2024-08-11" value="2014-08-11"/> 
```

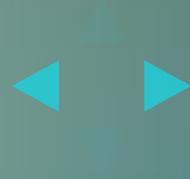
```
<input type="range" min="0" max="50" value="10"/> 
```

```
<input type="tel" placeholder="(416) 123-4567" pattern="^(\d{3})[-\s]\d{3}[-\s]\d{4}.*$"/>
```

```
<input type="color" placeholder="e.g. #bbbbbb"/> 
```

```
<input type="number" step="1" min="-5" max="10" value="0"/> 
```

```
<input results="10" type="search" placeholder="search..."/>   search...
```



AUDIO SUPPORT

```
<audio controls="controls">
    <source src="audio/supermario.mp3"
    <p>Your user agent does not support
    </audio>
```



```
<audio autoplay="autoplay" controls="controls">
    <source src="audio/supermario.mp3"
    <p>Your user agent does not support
    </audio>
```



VIDEO SUPPORT - 1

Local video

```
controls>
<source src="video/html5.ogv" type="video/ogg; codecs=vorbis">
<source src="video/html5.mp4" type="video/mp4; 'codecs=avc1.>
<p> Your browser is old.</p>
>
```



VIDEO SUPPORT - 2

Online video

```
controls preload>
<source src="http://clips.vorwaerts-gmbh.de/VfE.ogv" type="v
<source src="http://clips.vorwaerts-gmbh.de/VfE_html5.mp4" t
<p> Your browser is old.</p>
>
```



VIDEO SUPPORT - 3

Video Fragments

```
controls preload>
<source src="video/html5.ogv#t=15,20" type="video/ogg; codec
<source src="video/html5.mp4#t=15,20" type="video/mp4; 'code
<p> Your browser is old.</p>
>
```



CANVAS

```
<script>  
var c = document.getElementById("myCanvas");  
var ctx = c.getContext("2d");  
  
ctx.fillStyle = "#00A308";  
ctx.beginPath();  
ctx.arc(220, 220, 50, 0, Math.PI*2, true);  
ctx.closePath();  
ctx.fill();  
  
ctx.fillStyle = "#FF1C0A";  
ctx.beginPath();  
ctx.arc(100, 100, 100, 0, Math.PI*2, true);  
ctx.closePath();  
ctx.fill();  
  
ctx.fillStyle = "rgba(255, 255, 0, .5)";  
ctx.beginPath();
```



SVG

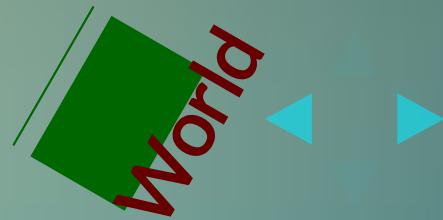
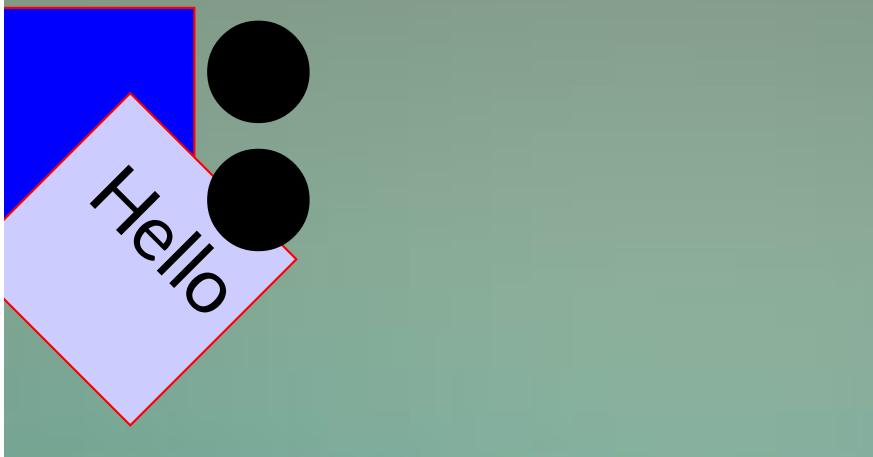
```
<svg width="1000" height="1000">
```

Text grounded with shapes

```
    <rect x="10" y="10" height="100" w
    <rect x="50" y="50" height="110" w
    <text x="70" y="100" transform="tr
    <circle class="myGreen" cx="140" c
    <circle class="myRed" cx="140" cy=
    <g transform="rotate(300 300 50)">
    <line x1="310" y1="310" x2="385" y
    <rect x="310" y="320" height="50"
    <text x="310" y="390" style="strok
```



```
        </text>
    </rect></line></g>
</svg></circle></circle>
```



CSS ANIMATION

Box with animation
effect



CSS ANIMATION - CODE

```
<style>
@keyframes mymove {
0% {
padding: 0;
}
50% {
padding: 0 20px;
color: white;
transform:translate(0px, 0px)
rotateZ(180Deg);

background-color: rgba(255,0,0,0.5);
}100% {
padding: 0 100px;
background-color:rgba(255,0,0,0.9);
}
}
```



WEB WORKER - BRINGING MULTI-THREADING TO JAVASCRIPT

EASY EXAMPLE:

Count numbers:

[Start Worker1](#) [Stop Worker1](#)

Count numbers:

[Start Worker2](#) [Stop Worker2](#)



FUTURE OF HTML5 - 1

Review - History after HTML5 - 1

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FUTURE OF HTML5 -2

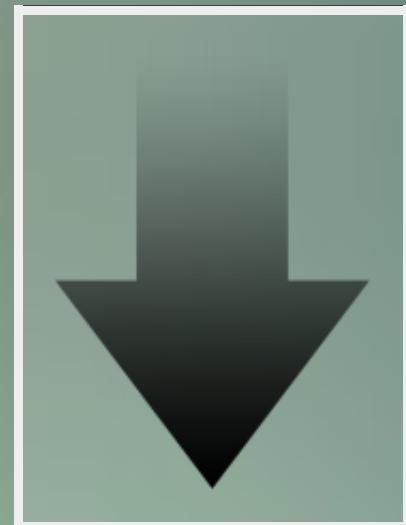
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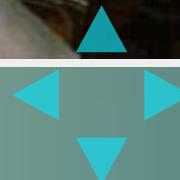
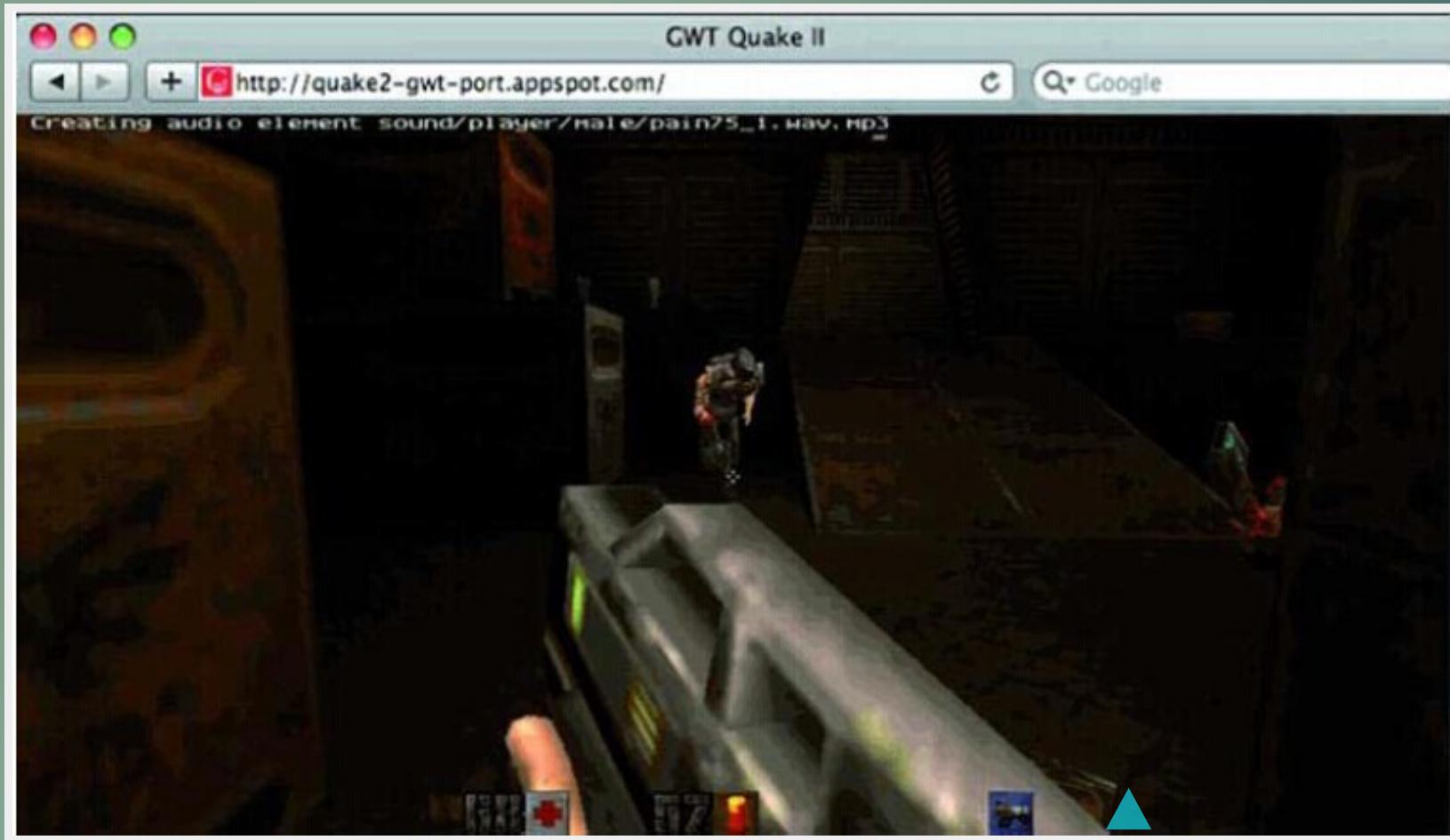
FUTURE OF HTML5 - 3

Several exciting features that may appear in browsers in the upcoming future



FUTURE OF HTML5 - 4

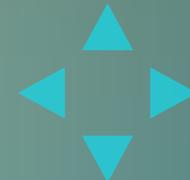
WebGL - HTML in Three Dimensions



FUTURE OF HTML5 - 5

Audio Data API

- Enable music creation in HTML5 applications
- Something cannot be done with the <audio> element.
- access to audio data



FUTURE OF HTML5 - 6

Mobile devices support

- Orientation
- Gestures
- Touches



FUTURE OF HTML5 - 7

Mobile devices support - Orientation

The orientation event can be added to the document body:

```
<body onorientationchange="rotateDisplay() ;">
```

orientation Meaning

value

0 The page is being held in the same orientation as its original load.

90 The device has been rotated 90 degrees clockwise (right) since the original load.

180 The device has been rotated upside-down since the original page load.

270 The device has been rotated 90 degrees counter-clockwise (left) since the page was originally loaded.



FUTURE OF HTML5 - 8

Mobile devices support - Gestures

Description

- t A user has placed multiple fingers on the screen and has begun a movement.
- ng The user is in the process of moving multiple fingers in a scale or rotation.
- The user has completed the scale or rotation by removing fingers.

```
gestureChange(event) {  
    // Get the amount of change in scale caused by the user gesture.  
    // A value of 1.0 represents the original size, while smaller  
    // values represent a zoom in and larger numbers represent a zoom  
    // based on the ratio of the scale value.  
    var scale = event.scale;  
    // Get the amount of change in rotation caused by the user gesture.  
    // The rotation value is in degrees from 0 to 360, where positive values  
    // indicate a rotation clockwise and negative values indicate a counter-  
    // clockwise rotation.  
    var rotation = event.rotation;  
  
    // Update the display based on the rotation.  
}  
  
// Add our gesture change listener on a document node.  
document.addEventListener("gesturechange", gestureChange, false);
```



FUTURE OF HTML5 - 9

Mobile devices support - Touches

Event Handler Description

- ontouchstart A finger has been placed on the surface of the touch device. Multitouch events will occur as more fingers are placed on the device.
- ontouchmove One or more of the fingers on the device has moved its location in a drag operation.
- ontouchend One or more fingers have been lifted away from the device screen.
- ontouchcancel An unexpected interruption has stopped the touch operations.



FUTURE OF HTML5 - 10

Mobile devices support - Touches - 2 Touch API

```
function touchMove(event) {  
    // the touches list contains an entry for every finger currently touching the screen  
    var touches = event.touches;  
  
    // the changedTouches list contains only those finger touches modified at this  
    // moment in time, either by being added, removed, or repositioned  
    var changedTouches = event.changedTouches;  
  
    // targetTouches contains only those touches which are placed in the node  
    // where this listener is registered  
    var targetTouches = event.targetTouches;  
  
    // once you have the touches you'd like to track, you can reference  
    // most attributes you would normally get from other event objects  
    var firstTouch = touches[0];  
    var firstTouchX = firstTouch.pageX;  
    var firstTouchY = firstTouch.pageY;  
}
```



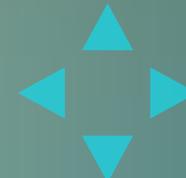
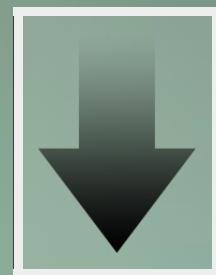
FUTURE OF HTML5 - 11

The Flash vs HTML5

Apple refused to adopt technology of Flash

Many Android devices don't support Flash, either
nearly half of the U.S. population has a mobile phone with
Internet access, and one in five page views on the Web
happen on a mobile device

As a consequence, Adobe decided to stop development of the
mobile browser version of Flash.



FUTURE OF HTML5 - 12

The growth of mobile engagement; the rise of Interactive Video for entertainment, advertising and shopping; and HTML5's open structure all combine to create the future of an HTML5-based web.



THE END
THANK YOU ALL FOR WATCHING.

